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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,511	07/07/2003	Lawrence C. Moulthrop	PES-0054-C	9348
23462	7590	08/11/2005	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			WILKINS III, HARRY D	
			ART UNIT	PAPER NUMBER
			1742	
DATE MAILED: 08/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,511

Applicant(s)

MOULTHROP ET AL.

Examiner

Harry D. Wilkins, III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/7/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

1. This application repeats a substantial portion of prior Application No. 09/842,617, filed 25 April 2001, and adds and claims additional disclosure not presented in the prior application. Since this application names an inventor or inventors named in the prior application, it may constitute a continuation-in-part of the prior application. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78. If Applicant does not intend to claim priority to 09/842,617, the first paragraph of the specification should be amended to clearly recite that 09/842,617 is merely a related case and priority is not claimed. In addition (no matter the disposition of the preceding), the data should refer to the application number, followed by a statement such as "now U.S. Patent No. 6,524,464".

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-5, 13 and 14 are rejected under the judicially created doctrine of

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obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,652,732. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '732 patent teach a system for generating a gas including an electrolysis cell, a fan ("generating an airflow"), a sail and a reed switch disposed to discontinue operation of the electrolysis cell when the fan fails ("actuating a magnetically actuatable reed switch").

It is noted that the '732 patent issued from the parent application of the present application. However, no restriction requirement was issued in the parent application that necessitated the filing of this divisional application. Therefore, this double patenting rejection is proper.

4. Claims 1-5, 13 and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,524,464. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '464 patent teach a system for generating a gas including an electrolysis cell, a fan ("generating an airflow"), a sail and a reed switch disposed to discontinue operation of the electrolysis cell when the fan fails ("actuating a magnetically actuatable reed switch").

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-5, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen (US 5,736,016) in view of Welsh et al (US 3,992,598).

Allen discloses (see abstract and figure 1) a gas generating system including a reactant source, a proton exchange membrane electrolysis cell and an electrical source.

Thus, Allen fails to disclose a ventilation system including a fan, a sail and a switch.

It would have been obvious to one of ordinary skill in the art to have added a ventilation system including a fan to produce a continuous airflow during operation of the cell in order to prevent buildup of gases, such as chlorine or hydrogen, that could pose safety hazards if allowed to accumulate.

Welsh et al teach (see abstract and figures) an actuating device including a vane (i.e.-sail) disposed in an airflow (i.e.-operable communication with fan), said vane being pivotally mounted in response to the airflow and a reed switch in operable communication with the vane such that the switch was capable of indicating when the airflow had ceased.

Therefore, it would have been obvious to one of ordinary skill in the art to have

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used the vane and reed switch as taught by Welsh et al in the system of Allen because the vane and reed switch would have been capable of indicating a failure of the ventilation system. It would have been obvious to one of ordinary skill in the art to have adapted the system to discontinue operation of the cell upon failure of the ventilation system in order to prevent a hazardous condition caused by a build-up of the gas produced by the cell.

Regarding the recitation of "hydrogen gas generating", this limitation is related to the manner in which the claimed electrolysis cell is operated. The cell of Allen is identical in structure to the claimed structure and would have been capable of operating in the claimed fashion (i.e.-producing hydrogen gas).

Regarding claim 13, this claim recites two "means-plus-function" limitations. These limitations are interpreted as follows:

- "means for generating hydrogen gas from a reactant source" is recited in proper means plus function language under 35 USC 112, 6th paragraph. It is interpreted to mean the structure shown in present figure 1 or any other means for generating hydrogen gas.

- "means for interrupting power to said means for generating hydrogen gas upon detection of a malfunction or failure of a ventilation system" is recited in proper means plus function language under 35 USC 112, 6th paragraph. It is interpreted to mean the structure shown in present figures 3-6 and functional equivalents thereof.

The polymer electrolyte membrane electrolysis cell of Allen has a structure which is identical to the structure of present figure 1.

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The vane-switch device of Welsh et al has a structure which is substantially identical to the structure of present figures 3-6.

8. Claims 1-5, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen (US 5,736,016) in view of Sturm et al (DE 26 52 697).

Allen discloses (see abstract and figure 1) a gas generating system including a reactant source, a proton exchange membrane electrolysis cell and an electrical source.

Thus, Allen fails to disclose a ventilation system including a fan, a sail and a switch.

It would have been obvious to one of ordinary skill in the art to have added a ventilation system including a fan to produce a continuous airflow during operation of the cell in order to prevent buildup of gases, such as chlorine or hydrogen, that could pose safety hazards if allowed to accumulate.

Sturm et al teach (see Derwent abstract) an actuating device including a blade (i.e.-sail) disposed in an airflow (i.e.-operable communication with fan), said blade being pivotally mounted in response to the airflow and a reed switch in operable communication with the blade such that the switch was capable of indicating when the airflow had ceased. Sturm et al teach that an alarm was raised when the ventilation system had failed (i.e.-the blade and reed switch operated to indicate that no air was flowing).

Therefore, it would have been obvious to one of ordinary skill in the art to have used the blade and reed switch as taught by Sturm et al in the system of Allen because the blade and reed switch would have been capable of indicating a failure of the

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ventilation system. It would have been obvious to one of ordinary skill in the art to have adapted the system to not only raise an alarm, but also to discontinue operation of the cell upon failure of the ventilation system in order to prevent a hazardous condition caused by a build-up of the gas produced by the cell.

Regarding the recitation of "hydrogen gas generating", this limitation is related to the manner in which the claimed electrolysis cell is operated. The cell of Allen is identical in structure to the claimed structure and would have been capable of operating in the claimed fashion (i.e.-producing hydrogen gas).

Regarding claim 13, this claim recites two "means-plus-function" limitations. These limitations are interpreted as follows:

- "means for generating hydrogen gas from a reactant source" is recited in proper means plus function language under 35 USC 112, 6th paragraph. It is interpreted to mean the structure shown in present figure 1 or any other means for generating hydrogen gas.

- "means for interrupting power to said means for generating hydrogen gas upon detection of a malfunction or failure of a ventilation system" is recited in proper means plus function language under 35 USC 112, 6th paragraph. It is interpreted to mean the structure shown in present figures 3-6 and functional equivalents thereof.

The polymer electrolyte membrane electrolysis cell of Allen has a structure which is identical to the structure of present figure 1.

The blade-switch device of Sturm et al has a structure which is substantially identical to the structure of present figures 3-6.

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Conclusion

A full translation of the Sturm et al document (DE 26 52 697) has been requested and will be forwarded on to Applicant as soon as it is prepared.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Harry D Wilkins, III
Examiner
Art Unit 1742

hdw